LUZEN PLUS. Universal DIMMING actuator for lighting control
ZN1DI-P400 **Technical Documentation**

FEATURES

- Reduced size: 90 x 60 x 35mm (2 DIN rail units).
- 1 Channel 400W for R L C loads or 125W for dimmable CFL and LED lamps @ 25ºC (230V – 50Hz).
- Automatic detection of R L C load type.
- Dimming pattern manual selection for CFL and LED lamps.
- KNX BCU integrated.
- Independent control assembly, to be mounted inside distribution boxes or electrical panels with DIN rails.
- Total data saving when power Failure occurs.
- CE directive compliant.

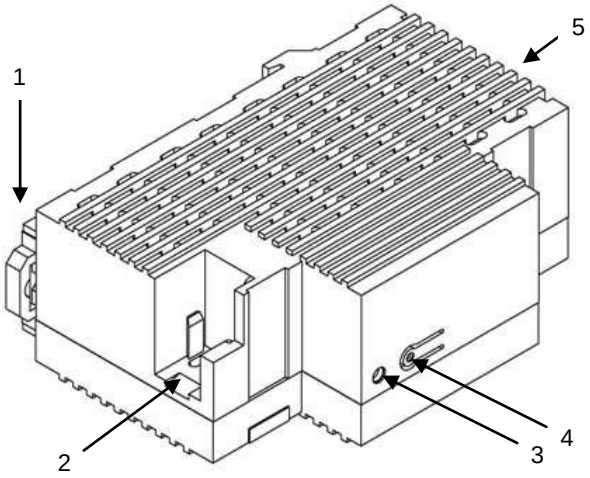

Figure 1. *LUZEN PLUS*

1. DIN rail unit clip	**2**. KNX bus connection	**3**. Programming / Test / Voltage surge LED
4. Programming/Test push button	**5**. Terminal block (load, neutral and phase)	

Programming/test button: push the button to set the PROGRAMMING MODE. If this button is held while plugging the device into the KNX bus, it goes into secure mode. If this button is held more than 3 seconds, the device goes into TEST MODE. Within the test mode, On/Off functionality by pushing the button is enabled (application program is not needed).

LED: lighting red = programming mode; blinking red = safe mode; lighting green = test mode; blinking blue = locked due to voltage surge (**only for application program version 3.3**).

GENERAL SYSTEM FEATURES		
Device type		Electric operation control device
KNX supply	Voltage	29V DC SELV
	Voltage range	21...31VDC
	Consumption	150mW
	Connection type	Typical bus connector TP1, 0,50 mm² section
External power supply		**230V-50Hz**
Max channel load		R L C Loads: 400W @ 25ºC; CFL and LED lamps 125W @ 25ºC (depending on manufacturer and model)
Min load rating		50W R L C loads; 5W CFL and LED lamps
Device action type		Type I
Electrical solicitations period		Long
Type of protection		IP 20, clean environment
Ambient temperature		-5 ºC to +45 ºC
Storage temperature		-20 ºC to +70 ºC
Ambient humidity		30 to 85% RH (no condensation)
Storage humidity (relative)		30 to 85% RH (no condensation)
Assembly		Independent control assembly to be mounted inside distribution boxes or electrical panels
Power failure response		Data saving
Operation indicator		Programming LED (red) ON when pushing the programming button. Test LED (green) ON when device is in Test mode
Weight		80 gr.
PCB CTI index		175 V
Enclosure		PC+ABS FR V0, halogen free

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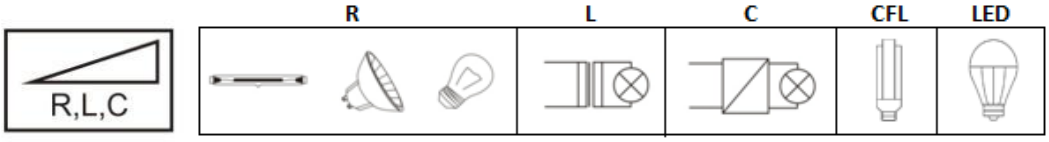
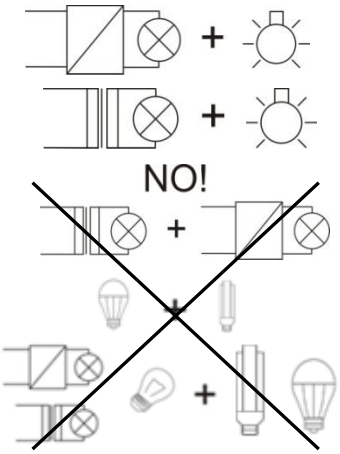
SUPPORTED LOADS



- R= Resistive
- L= Inductive
- C= Capacitive
- CFL = Dimmable Compact Fluorescent Lamps
- LED = Dimmable LED lamps

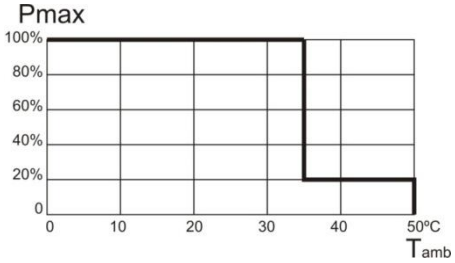
Note: to control dimmable CFL and LED lamps it is necessary to download the application program version 3.0 or higher (only for devices with reference ZN1DI-P400). For further information consult www.zennio.com.

LOAD MIXING



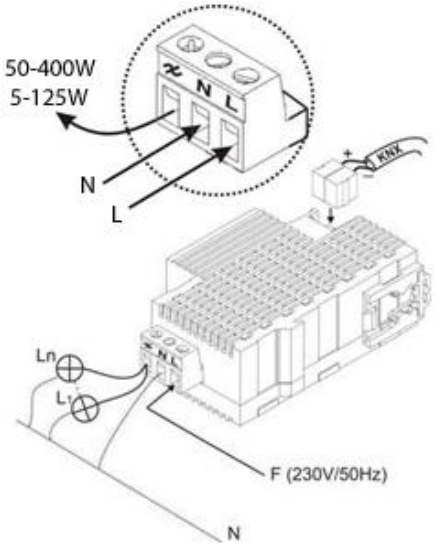
- For mixed resistive (R) with inductive (L) loads, do not exceed a 50% share for the resistive load.
- For mixed resistive (R) with capacitive (C) loads, do not exceed a 50% share for the resistive load.
- **NEVER connect capacitive loads and electronic transformers with inductive loads.**
- Do not mix CFL or LED lamps with R L C loads.
- It is not advisable to mix different models of CFL lamps, LED lamps or transformers since correct functioning can be affected.

OVERHEATING PROTECTION



- When the ambient temperature is too high the universal dimmer actuator will regulate itself, at a maximum of 20%.
- Once the ambient temperature decreases, the dimmer will resume normal operation. Refer to user manual.

OUTPUTS SPECIFICATIONS	
Contact type	Semiconductor switching device
Load protection	Yes; overheating, overload and short-circuit protection.
Switching capacity per output	400W @ 25ºC (230V-50Hz) CFL and LED lamps: 125W @ 25ºC (230V-50Hz)
Dropping voltage	Negligible
Connection type	Screw terminals clamp
Recommended cable section	0,25 mm² to 2,5 mm²
Cable type	Stranded or solid wire with crimping terminals.
Response time	Negligible



SAFETY INSTRUCTIONS

- Do not connect the mains voltage (230 V) or any other external voltages to any point of the KNX bus. Connecting an external voltage might put the entire KNX system at risk.
- Once installed, the device must not be accessible from the outside.
- In case of changing load, disconnect the main voltage (230V).
- Installation should only be performed by qualified electricians following applicable regulations on preventing accidents, as required by law.
- Ensure there is enough insulation between the AC voltage cables and the KNX bus cables.
- Keep away from water or humidity and do not cover the device with clothes, paper or any other material when in use.
- Not observing these safety instructions may cause fire or other hazards.